

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (withdrawn) A polynucleotide comprising an endogenous variant of the nucleotide sequence of SEQ ID NO: 1, or a degenerate variant of said endogenous variant.
2. (withdrawn) A polynucleotide according to claim 1 further comprising a space variant.
3. (withdrawn) A polynucleotide encoding a β -amyloid peptide-binding (BBP) protein comprising a PXDGS motif beginning at amino acid 237.
4. (currently amended) An isolated protein comprising the amino acid of SEQ ID NO: 2.
5. (currently amended) An isolated protein comprising the amino acid of SEQ ID NO: 2 from amino acid 68 to amino acid 269.
6. (currently amended) An isolated protein comprising the amino acid sequence encoded by the cDNA insert of clone BBP1-fl deposited under accession number ATCC 98617.
7. (currently amended) An isolated protein comprising the amino acid sequence from amino acid 185 to amino acid 217 of SEQ ID NO: ~~2~~ NO: 2.
8. (currently amended) A non-naturally occurring fusion protein comprising a ~~BBP1~~ an amino acid sequence with homology of 90% or greater to SEQ ID NO: 2 linked to a ~~heterologous protein or peptide~~ sequence.
9. (cancelled)
10. (withdrawn) A method for determining a polynucleotide encoding a β -amyloid peptide-binding protein (BBP) in a sample comprising the steps of (a) hybridizing to a sample a probe specific for said polynucleotide under conditions effective for said probe to hybridize specifically to said polynucleotide; and (b) determining the hybridization of said probe to polynucleotides in the sample, wherein said probe comprises a nucleic acid sequence having a region of 20 or more base pairs at least 90% identical to the polynucleotide sequence of SEQ ID NO: 1.
11. (withdrawn) A method for determining a polynucleotide encoding a β -amyloid peptide-binding protein (BBP) in a sample comprising the steps of (a) hybridizing to a sample a probe specific for said polynucleotide under conditions effective for said probe to hybridize

specifically to said polynucleotide; and (b) determining the hybridization of said probe to polynucleotides in the sample, wherein said probe comprises a nucleic acid sequence having a region of 20 or more base pairs at least 90% identical to the polynucleotide sequence of the cDNA insert of ATCC 98617 or ATCC 98399.

12. (withdrawn) An antibody that binds specifically to a polypeptide comprising the amino acid sequence of SEQ ID NO:1.

13. (withdrawn) An antibody that binds specifically to a polypeptide comprising the amino acid sequence of the β -amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617.

14. (withdrawn) An antibody that binds to an extracellular region of a BBP.

15. (withdrawn) An antibody according to claim 14 wherein the extracellular region comprises the PXDGS motif.

16. (withdrawn) A method for detecting in a sample a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO: 2, said method comprising (a) incubating with a sample a reagent that bind specifically to said polypeptide under conditions effective for specific binding; and (b) determining the binding of said reagent to said polypeptide in the same.

17. (withdrawn) A method for detecting in a sample a polypeptide comprising a region at least 90% identical in sequence to the amino acid sequence of the β -amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617, said method comprising (a) incubating with a sample a reagent that bind specifically to said polypeptide under conditions effective for specific binding; and (b) determining the binding of said reagent to said polypeptide in the same.

18. (withdrawn) A method for diagnosing a disease characterized by aberrant expression of human β -amyloid peptide (BAP), comprising (a) incubating a sample indicative of the aberrant expression of human β -amyloid peptide with a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO:2 under conditions effective for specific binding of said reagent to said human β -amyloid peptide in the sample.

19. (withdrawn) A method of diagnosing the disease characterized by aberrant expression of human β -amyloid peptide, comprising (a) incubating a sample indicative of the aberrant

expression of human β -amyloid peptide with a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of the β -amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617 under conditions effective for specific binding of said reagent to said human β -amyloid peptide; and (b) determining the binding of said reagent to said human β -amyloid peptide in the sample.

20. (withdrawn) A diagnostic process comprising analyzing for the presence of a polynucleotide of claim 1 in a sample derived from a host.

21. (withdrawn) A method for identifying compounds which regulate the activity of a β -amyloid peptide binding protein comprising (a) incubating a sample comprising human β -amyloid peptide in a test medium containing said test compound and a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO:2 under conditions effective for specific binding of said reagent to said human β -amyloid peptide; (b) comparing the binding of said reagent to said peptide in the same in the presence and absence of said test compound; and (c) relating the difference between the binding in step (b) to the test compound regulating the activity of the β -amyloid peptide binding protein.

22. (withdrawn) A method for identifying compounds which regulate the activity of a β -amyloid peptide binding protein comprising (a) incubating a sample comprising human β -amyloid peptide in a test medium containing said test compound and a amino acid sequence of the β -amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617 under conditions effective for specific binding of said reagent to said human β -amyloid peptide; (b) comparing the binding of said reagent to said peptide in the sample in the presence and absence of said test compound; and (c) relating the difference between the binding in step (b) to the test compound regulating the activity of the β -amyloid peptide peptide binding protein.

23. (withdrawn) A method for the treatment of a patient having need to inhibit β -amyloid peptide accumulation in the brain comprising administering to the patient a therapeutically effective amount of BBP1.

24. (withdrawn) A method for the treatment of a patient having need of such treatment comprising administering to the patient a therapeutically effective amount of an antibody which binds to an extracellular portion of BBP1.

25. (withdrawn) A transgenic or chimeric nonhuman animal comprising the polynucleotide of SEQ ID NO: 1 or a degenerate variant of said polynucleotide.

26. (withdrawn) The animal of claim 25 wherein the transgene is under the control of a regulatable expression system.
27. (withdrawn) A knockout human animal wherein at least one allele of the BBP1 gene has been functionally disrupted.
28. (withdrawn) A knockout human animal wherein at least one allele of the BBP1 gene can be functionally disrupted by the induction of the Cre gene.
29. (withdrawn) A knockout according to claim 28 wherein the Cre gene is under the control of a tissue specific promoter.
30. (withdrawn) A knockout according to claim 28 wherein the Cre gene is under the control of a developmentally specific promoter.
31. (withdrawn) A knockout according to claim 28 wherein the Cre gene is under the control of an inducible promoter.
32. (withdrawn) A method for inhibiting expression of the BBP1 gene comprising providing to a cell double stranded ribonucleic acid complementary to a portion of the BBP1 gene wherein said ribonucleic acid comprises about 600 base pairs.
33. (withdrawn) A method of inhibiting expression of the BBP1 gene in a cell comprising providing said cell with an antisense nucleic acid.
34. (new) The fusion protein of claim 8 wherein the protein sequence comprises a human β -Amyloid Peptide (BAP).
35. (new) The fusion protein of claim 34 wherein the BAP is BAP42.
36. (new) The fusion protein of claim 8, wherein the protein sequence linked to SEQ ID NO: 2 comprises a heterologous protein.
37. (new) A fusion protein comprising the amino acid sequence of SEQ ID NO: 2 from amino acids 68 to 269 with two regions of sufficient length and hydrophobicity to transverse a cellular membrane as deposited under the accession number ATCC 98399.
38. (new) A non-naturally occurring fusion protein comprising the amino acid sequence of SEQ ID NO: 2 linked to a peptide sequence.
39. (new) The fusion protein of claim 8 wherein the protein linked to SEQ ID NO: 2 comprises maltose binding protein (MBP), glutathione-S-transferase (GST), or thioredoxin (TRX).